

Product Evaluation

RV59 | 0821

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: RV-59

Effective Date: August 1, 2021

Re-evaluation Date: August 2025

Product Name: Solar Powered Attic Fans

Manufacturer: Attic Breeze, LLC
1370 FM 116
Gatesville, TX 76528
(254) 865-9999

Models:

SFA model series fans

SFD model series fans

General Description:

SFA Model Series: These model series are self-flashing roof mounted solar attic fans designed for composition (asphalt) shingle roofs or similar low-profile roofing materials. This series comes standard in a powder coated finish and features the solar panel directly attached to the top of the fan housing. The SFA Model Series includes the following models:

GEN2 Models

AB-2022A	20W solar panel
AB-3022A	30W solar panel
AB-4022A	40W solar panel

GEN3 Models

AB-2523A	25W solar panel
AB-3523A	35W solar panel
AB-4523A	45W solar panel

A top view, bottom view, side view, and front view with dimensions are included in this evaluation report.

SFD Model Series: These model series are self-flashing roof mounted solar attic fans designed for composition (asphalt) shingle roofs or similar low-profile roofing materials. This series comes standard in a powder coated finish and features the solar panel mounted remotely from the fan housing. The SFD Model Series includes the following models:

<u>GEN2 Models</u>		<u>GEN3 Models</u>	
AB-2022D	20W solar panel	AB-2523D	25W solar panel
AB-3022D	30W solar panel	AB-3523D	35W solar panel
AB-4022D	40W solar panel	AB-4523D	45W solar panel
AB-6022D	60W solar panel	AB-6523D	65W solar panel

A top view, bottom view, side view, and front view with dimensions are included in this evaluation report.

Note: For the SFD models, the solar panel is remotely mounted. If the solar panel is remotely mounted to the structure, then the attachment of the solar panel to the structure is outside the scope of this evaluation report and must be evaluated by a professional engineer.

Ventilator Construction: The vent is constructed of 24-gauge Zincalume with a 20" inside conical base diameter and a 28" x 28" square flange. The head of the vent is created utilizing two sides along with a top cover. The head portion is fastened together with twenty 3/16" spot welds per side. The head portion is secured to the throat of the base with four 1" wide 16-gauge steel support flanges, each attached to the throat with five 1/4" spot welds. The head portion and the support flanges are attached with one 1/4 x 0.750" Phillips PHSS bolt with a 1/4" SS neoprene rubber bonded washer, 1/4" SS lock washer, and a 1/4" SS wing nut. A 1/4" SS mesh screen is secured to the steel flanges with one 3/16" aluminum pop rivet, and two pop rivets at the overlap. Additionally, three SS "L" motor mount brackets are secured on the interior top of the head portion, each with two 1/4" x 0.750" Phillips PHSS bolts, a 1/4" SS neoprene rubber bonded washer, 1/4" SS lock washer, and a 1/4" SS hex nut. The square flange is formed (beaded) into the collar.

Solar Panel: The solar panel measures 16-1/4" wide x 19-3/4" high x 1-1/8" thick and is mounted on the top of the vent head. The solar panel is secured to the vent utilizing four 1/4 x 0.750" HH SS bolts with a 1/4" SS neoprene rubber bonded washer, 1/4" SS lock washer, and a 1/4" SS wing nut located one at each corner.

Limitations:

Roof Slope: Do not install the product on roof slopes less 3:12 or greater than 12:12.

Roof Deck: Minimum 15/32" thick plywood.

Roof Framing: Rafters or trusses must not exceed 24" on center.

Roof Deck Attachment: The roof deck must be secured to the roof framing to resist the required wind uplift design pressures.

Design Pressure: The maximum allowable design pressure is +/-115 psf

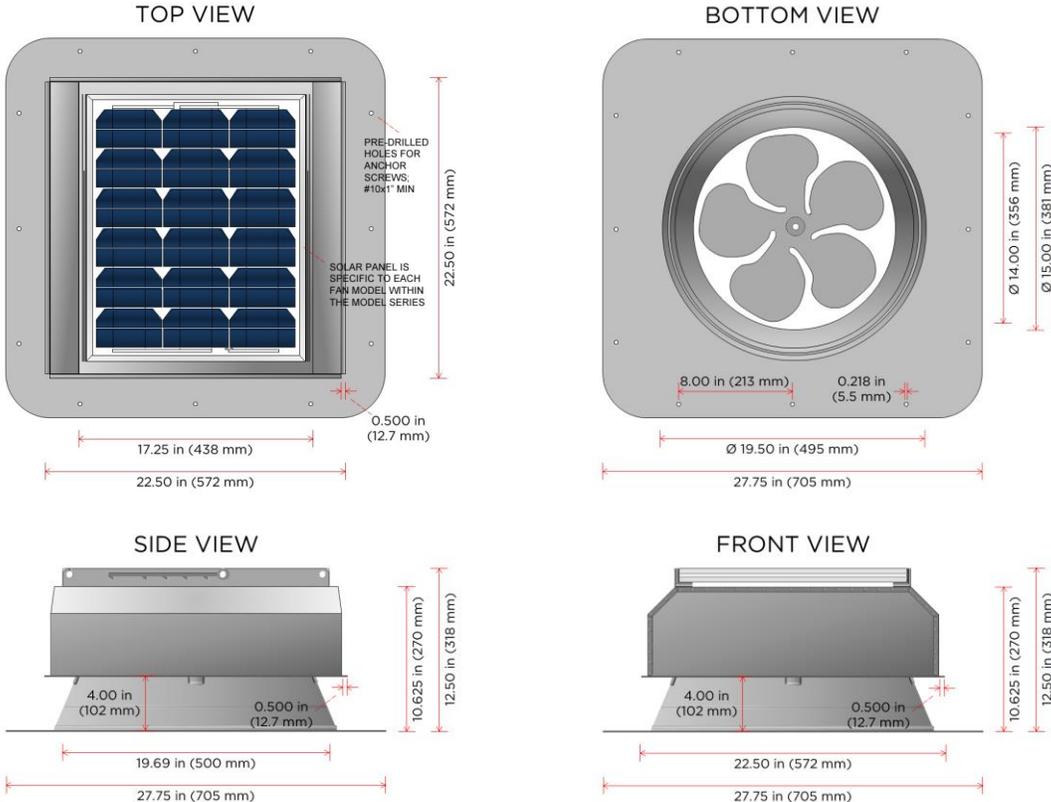
Installation:

Locate the attic vent on the roof as specified by the product manufacturer. Mark a 20" diameter circle on the roof as specified by the product manufacturer. Using the mark as a guide, cut a 20" diameter hole in the roof. Do not cut through any roof framing members (rafters or trusses). Lift the shingles located directly around the cut hole. Slide the attic vent flange underneath the shingles and underlayment and position the attic vent so that it is centered with the attic hole. Follow the manufacturer's instructions for proper vent placement. The flange of the vent is secured to the wood structural panel roof deck with a total of eight minimum No. 10 x 1" Phillips Pancake Head wood screws. One (1) fastener is required at each corner. One (1) fastener is required at the mid-point of each side. The fasteners must be long enough to penetrate the roof vent flange and completely through the roof deck. Apply weatherproofing as specified by the product manufacturer.

SFD Models: The solar panel is remotely mounted. If the solar panel is remotely mounted to the structure, then the attachment of the solar panel to the structure is outside the scope of this evaluation report and must be evaluated by a professional engineer.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.

Attic Breeze® SFA model series fans



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